

Bellwork: 12/3/12

Find the equation of the line perpendicular to $2x-3y=9$ that goes through the point $(-4,-5)$

$$\begin{aligned} 2x-3y &= 9 \\ -3y &= -2x+9 \\ \frac{-3y}{-3} &= \frac{-2x+9}{-3} \\ y &= \boxed{\frac{2}{3}x-3} \end{aligned}$$

$$\begin{aligned} m_{\perp} &= -\frac{3}{2} \\ y+5 &= -\frac{3}{2}(x+4) \\ y+5 &= -\frac{3}{2}x-6 \\ y &= -\frac{3}{2}x-11 \end{aligned}$$

E
G
E

5.3 Factoring
Algebra 2 5.0

Name _____
Date _____
Period _____

Factoring Steps:

1) G.C.F. - greatest common factor

2) Special Cases

$4x^2-9 \rightarrow$ D.O.T.S. - difference of 2 squares

$4x^2+20x+25 \rightarrow$ P.S.T. - perfect square trinomial

$\left. \begin{matrix} x^3+8 \\ x^3-8 \end{matrix} \right\} \rightarrow$ Sum/difference of cubes

3) Grouping Method

~~if not, repeat steps 1-3~~

4) General method

Factoring by GCF:

$$\begin{array}{l} 1) \ 3x^3 - 6x + 9 \\ \quad 3(x^3 - 2x + 3) \end{array}$$

$$\begin{array}{l} 2) \ 12x^2y^3 - 24xy^2 \\ \quad 12xy^2(xy - 2) \end{array}$$

$$\begin{array}{l} 3) \ 15x^3 + 10x^2 - 5x \\ \quad 5x(3x^2 + 2x - 1) \end{array}$$

$$\begin{array}{l} 4) \ -12x^3y^2z - 6x^2y^2z \\ \quad -6x^2y^2z(2x + 1) \end{array}$$

$$\begin{array}{l|l} 5) 3x(\underline{5x+7}) + 4(\underline{5x+7}) & 6) (2x+4)3 - 5x(2x+4) \\ (\underline{5x+7})(3x+4) & (2x+4)(3-5x) \end{array}$$

pg 221 #32-37